WHY DOES PUBLIC SPACE MATTER?

Report on Findings from
TerraPublica, The Database of Public Space Research

Research Team Including:
Setha Low, The Graduate School, City University of New York;
Vikas Mehta, University of Cincinnati;
Troy Simpson, The Graduate Center, CUNY

Moderated by
Michael Mehaffy, Sustasis Foundation
Future of Places Research Network
Thanks to the

Public Space Research Group
The Graduate Center, City University of New York

And to creators and developers of the database project:
Peter Elmlund, Tigran Haas and Anna-Paula Jonsson
KTH Royal Institute of Technology and the Ax:son Johnson Foundation

And our panelists and participants:
Setha Low, The Graduate School, City University of New York;
Vikas Mehta, University of Cincinnati;
Troy Simpson, The Graduate Center, CUNY
Michael Mehaffy, Sustasis Foundation
Future of Places Research Network
And other participants!

Music by Joe Sample, from the album Carmel - available on most music platforms
Panelists:

Setha Low, Distinguished Professor of Anthropology and Environmental Psychology, and head of the Public Space Research Group, at the Graduate Center of the City University of New York

Vikas Mehta, Fruth Gemini Chair and Professor of Urbanism at the University of Cincinnati

Troy Simpson, Research Associate at the Public Space Research Group, The Graduate Center, City University of New York.

Michael Mehaffy (Moderator), Research Director of the Future of Places Research Network
As we work to implement the Sustainable Development Goals and the New Urban Agenda – and other seminal challenges of urban equity, resiliency, and sustainability of our time – the role of public space looms especially large. Yet there is a major gap in the resources available to assess and synthesize research, and translate it into effective practice. Join us for a presentation and discussion of TerraPublica, a new database developed by colleagues at the Centre for the Future of Places at KTH Royal Institute of Technology, Stockholm, and allied institutions.
“New Urban Agenda”
Developed and approved at Habitat III, Quito, Ecuador, adopted by acclamation by all 193 countries, Dec. 2016
New Urban Agenda:

A notable emphasis on public space (the subject of nine separate paragraphs)
Public space benefits identified in the New Urban Agenda:

...social interaction and inclusion
...human health and well-being
...economic exchange
...cultural expression
...improving the resilience of cities to disasters and climate change
...physical and mental health
...household and ambient air quality, to reducing noise
...promoting attractive and liveable cities [and] human settlements
...prioritizing the conservation of endemic species.
New Urban Agenda:

We commit ourselves to promoting the creation and maintenance of well-connected and well-distributed networks of open, multipurpose, safe, inclusive, accessible, green and quality public spaces...

Sustainable Development Goals, Target 11.7:

- By 2030, provide universal access to safe, inclusive and accessible, green and public spaces...
Lessons of COVID-19

Public space matters!

We miss it when we don’t have it...
For a reason!
Lessons of COVID-19

The pandemic has exacerbated (and also revealed) the problems of an already over-encapsulated, high-emissions, high-depletion, high-impact, car-dependent lifestyle...

...with highest impacts (like the virus itself) on the most vulnerable populations, including the poor, the infirm, the young, and the elderly...
“Density” in the abstract is not the problem in the age of COVID-19. The pattern of connectivity is.
Lessons of COVID-19

There are ways to maintain mixed, walkable cities with good-quality public space, by providing “sociable distancing”
More broadly… Public space needs to protect us as well as connect us.

It must exclude as well as include.

It must do that at a variety of scales.
The foundation of urban connectivity
“...What is required is a new definition of the city, as a contact system, as a set of interactions and flows that define the kinds of networks that enable creativity and innovation to thrive and grow.”

- Mike Batty and Peter Ferguson

...while also creating remarkable efficiencies and reductions of resource consumption rates...
A better understanding of “the kind of problem a city is...” (Jacobs)
The importance of “weak ties” formed in public spaces and adjoining semi-public ones (versus “strong ties” formed at home or work, and in most social media relationships)
Public space benefits: Economic...

Taking Innovation to the Streets: Microgeography, Physical Structure and Innovation

Maria P. Roche

Posted Online August 21, 2019
https://doi.org/10.1162/rest_a_00966

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Review of Economics and Statistics
-Just Accepted-
JEL Classification: J21, J24, H23, O18, O30
Keywords: Microgeography, Innovation, Street Infrastructure, Knowledge Exchange, Interactions

Abstract Authors

In this paper, we analyze how the physical layout of cities affects innovation by influencing the social and economic interactions among businesses and individuals. We use a novel dataset of street-level microgeography data from a major metropolitan area to estimate the impact of physical infrastructure on innovation outcomes. Our results suggest that investments in street infrastructure, such as sidewalks and public spaces, can significantly enhance innovation by facilitating social interactions and fostering knowledge exchange among local businesses and residents. This finding has important implications for urban planning and policy, as it highlights the potential benefits of investing in physical infrastructure to promote innovation and economic growth.
Dying alone
The social production of urban isolation

Eric Klinenberg
Northwestern University, USA

ABSTRACT In July 1995 over 700 Chicago residents, most of them old and impoverished, died in a short but devastating heat wave. As part of a social autopsy of this disaster that goes beyond natural factors to uncover the institutional forces that made the urban environment suddenly lethal, this article examines the social production and lived experience of everyday urban isolation. Accounts from ethnographic investigations in affected neighborhoods and of the city agencies entrusted with dealing with the issue are used to highlight four key conditions: (1) the increase in the number and proportion of people living alone, including seniors who are frail and suffer from chronic conditions; (2) the inability to access the spaces needed to escape the heat; (3) the lack of access to cooling or air conditioning; (4) the reluctance of emergency service providers to address the problem.

On October 22, 2012, an African easterly wave formed in the Caribbean Sea and quickly grew into a tropical storm with frightening potential. It was the hottest year in recorded human history (though that record has subsequently been shattered), and the seawater was unusually warm. Strong winds...
“The degradation and fortification of urban public space”

- One of four “key conditions” of deaths from the 1995 Chicago heat wave as listed by Klinenberg
Public space benefits: Resilience and adaptation…

“Social infrastructure” (within public space)
Reducing heat island effects (Kelbaugh)
- Increasing shade and comfort (Hakim)
- Reducing pavement area per person (Litman)
- Reducing emissions per person (UNFCC)
- Providing water infiltration zones (flood risk reduction) (Gill, Handley, Ennos, Pauleit)
- Supporting low-carbon, low-resource consumption lifestyles
- And other benefits...
The Challenge of Implementation

Yet public space is currently in alarming decline around the world… Does this matter? If so, what do we do about it?
The Current Global Challenge...

Still moving in the **wrong** direction
Rapid urbanisation: We are on track to produce more urban fabric in the first half of the 21st Century than in all of previous human history.
Rapid urbanisation: We are on track to produce more urban fabric in the first half of the 21st Century than in all of previous human history.
Rapid urbanisation in many parts of the world: some good news, but also many alarming aspects. Much of what is being built is sprawling and resource-inefficient...
Explosive growth of informal settlements…
And “market-rate” development that is resource-intensive, high-emissions, high-depletion… in a word, unsustainable.
We in developed economies need to recognize the urgent need to overcome poverty and its ills...
While finding a viable alternative to this model... the “crack cocaine” of economic development (sprawl in the periphery, gentrification in the core)

A quick economic “high” followed by a (planetary) hangover...
In both cases, failing to fully provide what cities can...
“...What is required is a new definition of the city, as a contact system, as a set of interactions and flows that define the kinds of networks that enable creativity and innovation to thrive and grow.”

- Mike Batty and Peter Ferguson

...while also creating remarkable efficiencies and reductions of resource consumption rates...
Public Space Research Questions

But getting the language adopted is one thing; actually achieving the goals is quite another!

Key questions:

- What is the structure of public space?
- Why does it matter? What are the benefits?
- What is the EVIDENCE of this? (Persuasive?)
- How does it function? (Processes)
- How does it fail, or succeed?
- How can we create and/or manage it?
And especially…

*How do we gather and share this knowledge?*
CFP Public Space Research Database
Project “TerraPublica”

A project to curate research on public space scattered across many different fields
“Public space is central – it creates networks of interaction, jobs, and institutions.”

Dr. Luis Bettencourt, physicist and urban researcher
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<tr>
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<td>Apr 28, 2016</td>
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<tr>
<td><strong>PDF</strong></td>
<td>Sense of Community Built Environment</td>
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<td><strong>By</strong></td>
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<tr>
<td><strong>Title</strong></td>
<td>Sense of Community and Its Association With the Neighborhood Built Environment</td>
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<tr>
<td><strong>Author(s)</strong></td>
<td>French, S. et al.</td>
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<td><strong>Behavior</strong></td>
<td>Movements</td>
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<tr>
<td><strong>Key words</strong></td>
<td>sense of community, neighborhood design, walkability</td>
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<td><strong>Main Finding</strong></td>
<td>Sense of community was positively associated with walking for transport and positive perceptions of neighborhood quality, and negatively associated with residential density.</td>
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<td><strong>Key concept</strong></td>
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**Research:**
Peter Emlund
Apr 28, 2016 at 2:46 PM

The understanding of urban form is limited and very technocratic.

Peter Emlund
Apr 28, 2016 at 2:47 PM

**Comment:**

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<td>Detached single family housing</td>
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<td>Talen, E. (2006)</td>
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<td>Thompson, T.</td>
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SNAPSHOTS

A randomized selection of the articles in the database. Don’t find anything interesting? Hit the refresh button until you do!

The defensible space model of fear and elderly public housing residents
Normoy, J. B. & Foley, J. M.

Panhandling and the contestation of public space in Guangzhou
Flock, R.

Lively Streets
Vikas Mehta

Cultural diversity and spatial structure in the Indian urban context
Raman, S., & Demosky, N.

Walkable streets: pedestrian behavior, perceptions and attitudes
Mehta, V.

EXPLORE MORE RESEARCH
The effects of pathway configuration, landmarks and stress on environmental cognition

Gary W. Evans, Brian Bresolin, Kendall J. Bryant, Tommy Gärling & Mary Anne Skorpanich

Go to article

APA

Keywords
Environmental Changes, Environmental Cognition, Experimental Method, Landmarks, Pathway Configuration, Stress

Abstract
The results of this study indicate that manipulations of the pathway grid configuration and landmark placement in a setting cause changes in environmental knowledge. These experimental manipulations were accomplished using a realistic, dynamic simulation technique at the Berkeley Environmental Simulation Laboratory. Measures of environmental knowledge include: memory for incidental information along the simulated urban route, accuracy of route maps, relocation memory for scenes along the route, and questionnaire measures. Data are also presented showing both positive and negative effects of experimental changes in spatial and environmental stimuli.
Main finding
This study explores how differences in certain characteristics of a simulated urban landscape relate to users' knowledge of the landscape. Participants more accurately recalled the path taken when the landscape was on a grid-based system, but the grid system helped little to improve memory on the location of specific landmarks. While most differences between different simulated landscapes did not result in differences in memory, some memory of landmarks improved in a "quiet" as opposed to "noisy" experimental condition.

Description of method used in the article
Participants (N = 128, average age: 20) were randomly assigned to one of eight experimental conditions wherein they viewed a four-minute video of a streetscape route at the equivalent of 20 mph. The video was constructed from a 1:16 scale model of an urban streetscape with differences between conditions related to (a) presence of landmarks and (b) a grid-based or non-grid-based street network. Randomly assigned conditions included (a) no landmarks/non-grid, (b) internal landmarks/non-grid, (c) external landmarks/non-grid, and (d) no landmarks/grid, with participants in either (a) quiet or (b) noisy conditions. Noise (sounds of vehicles, machinery, people speaking) is used as a proxy for "stress." Participants viewed the color-filmed video simulation, then (a) completed incidental memory tasks, (b) drew a route map, (c) ordered and placed photos spatially, and (d) completed a demographic questionnaire. Analysis of the relationship between environmental features and memory were analyzed via 2x4 ANOVA with Scheffe post hoc tests.

Verdict
Of some practical use if combined with other research
Early Conclusions:

- There is a large but incomplete body of literature on public space, with many gaps
- It is scattered across disciplines and the picture is fragmented
- Nonetheless, there are clear impacts from variations in public space structure as it relates to larger patterns of urban form and regional structure
- There are particular impacts in the relation between public space and adjacencies of private spaces
- These structures have impacts on urbanization pathways for resilience and adaptation, among other impacts
- The field is dynamic, with exciting new developments
Thank you!
Public Space in the New Urban Agenda: Research into Practice for Cities for All

Evaluating Public Space Research using the Public Space Database

Vikas Mehta, PhD
Professor
Fruh/Gemini Chair
Ohio Eminent Scholar of Urban/Env. Design
Journal of Urban Design
Journal of Urbanism
Urban Design International
Journal of Planning Education and Research
Journal of American Planning Association
Journal of Architectural and Planning Research
Landscape and Urban Planning
The Town Planning Review
Journal of Architectural Education
Australian Planner
Journal of Construction in Developing Countries
The Architectural Science Association
Architectural Science Review
...
Public Space Database
structure

organizing categories

Urban Form
Design
Human Experience
Social Relations
Social Interaction
Environment
Well Being
History
Economics
Politics
Governance and Management
Art

key concepts

Urban form
Scale of urban form
Spatial networks and systems
Urban morphology
Streets as public spaces

Well-being
Active lifestyle
Aesthetic benefits
Restorative activities
Thermal comfort

Economics
...
...
...
EXPLORE THE RESEARCH BY KEY CONCEPTS

ACTIVE LIFESTYLE
AESTHETIC BENEFITS
AFFORDANCE
ARTICULATION OF SPACE
BIOPHILIA
CIVIC ENGAGEMENT
CLIMATE CHANGE ADAPTATION
COMMUNITY GOVERNANCE
CONFLICTS IN SPACE
DIGITAL TECHNOLOGIES
DISCOVERY AND LEARNING
DISORDER
ENTREPRENEURSHIP
EVOLUTION OF PUBLIC SPACE
GENTRIFICATION
HERITAGE AND CULTURAL PRESERVATION
public space research over time

Organizing Category
- 01. Public Space and Urban Form
- 02. Public Space and Design
- 03. Public Space and Human Experience
- 04. Public Space and Social Relations
- 05. Public Space and Social Interaction
- 06. Public Space and Health
- 07. Public Space and Environment
- 08. Public Space and History
- 09. Public Space and Economics
- 10. Public Space and Politics
- 11. Public Space and Care
- 12. Public Space and Governance
- 13. Public Space and Research Methodologies
- 14. Public Space and Artistic Expression